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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/574,345	04/03/2006	Naoki Hori	067471-0109	8864
53080 7590 08/31/2009 MCDERMOTT WILL & EMERY LLP 600 13TH STREET, NW WASHINGTON, DC 20005-3096				
EXAMINER BUTCHER, BRIAN M				
ART UNIT		PAPER NUMBER		
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/574,345

**Applicant(s)**

HORI ET AL.

**Examiner**

BRIAN BUTCHER

**Art Unit**

2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 June 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 10 - 27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 10 - 27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 December 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 10, 11, 14, 16, 18, and 20** are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admission of Prior Art, hereinafter referenced as AAPA.

Regarding **claim 10**, AAPA discloses "A data storage method . . . a recording medium" (page 26 of Applicant's specification, lines 26 - 28, and figure 10), "a plurality of pieces of audio data . . . to one of the pieces of audio data" (page 23, lines 26 - 28), "storing the read pieces of audio data . . . and an audio data area for storing audio data" (page 26, line 26 through page 27, line 22), "a default setting step . . . audio data area by a control unit of the playback device" (page 27, lines 2 - 4 and figure 7 (Notice that the conventional optical disc playback device of figure 7 is controlled by a microcontroller 13 which provides overall control of the playback device.)), "a management information storing step of sequentially storing pieces of read management information [ ] into the management information area" (page 27, lines 7 - 9, and figure 11 (Notice that the management information is sequential in figure 11 (c).)), "a re-setting step . . . management information is stored" (page 28, lines 19 - 21, and figure 12A (Notice that the management area is increased because storage space is needed for file

management information which is beyond the initial storage size of the area. In other words, the initial file management area is full.), "an audio data storing step . . . from the recording medium" (page 27, lines 4 - 6 and page 28 lines 19 - 21 (Notice that the audio data area remaining after the partition of figure 12A is of a remaining capacity resulting from the increase in additional storage space required for storing file management information.)), and "wherein data length of each piece of management information . . . included in each piece of management information" (figure 11 (Notice that the length of each file name is variable (i.e., of the 32 bytes of space available for a file name, only 25 bytes which correspond to the length of the "UTANDA\_HIKARU\_DISTANCE.mp3" file has actual data) and that the remaining bytes are part of the available file name area for a particular file, but not part of the actual data of the file name.)). However, AAPA fails to disclose "storing specifying information specifying a storage location of each of the pieces of read management information into the management information of the storage unit".

In the same field of endeavor, AAPA teaches a file information area 922 that is part of a file management information area 920 that stores information regarding the start and end addresses of audio data (page 28, lines 1 - 3).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify AAPA by specifically using the teachings of AAPA to "[store] specifying information specifying a storage location of each of the pieces of read management information into the management information of the storage unit" because one having ordinary skill in the art would recognize from the further

teachings of AAPA that it would have been obvious to indicate the location of management information with addresses (like the indication of the location of audio data with addresses in the prior art) in order to re-locate management information on a recording medium that is unreadable from a previous stored condition in a memory.

Regarding **claim 11**, AAPA discloses everything claimed as applied above (see claim 10, in addition, AAPA discloses that the step of storing management information is performed again after a determination as to whether all management information is acquired is made (page 27, lines 7 – 15) and that the memory 10 is partitioned as shown in figure 12A when additional file management information storage area is needed.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of AAPA by specifically using the additional teachings in AAPA to perform "the re-setting step" repeatedly because one having ordinary skill in the art would want to ensure that all file management information read is stored in the memory 10.

Regarding **claim 14**, AAPA discloses everything claimed as applied above (see claim 10), in addition, AAPA discloses that the file management information area 920 stores file names of corresponding audio data (page 27, line 27 through page 28, line 1).

Regarding **claim 16**, AAPA discloses everything claimed as applied above (see claim 10), in addition, AAPA discloses "wherein the recording medium in an optical disc medium" (page 26, lines 26 - 28).

Regarding **claim 18**, AAPA discloses everything claimed as applied above (see claim 10), in addition, AAPA discloses an audio data area a management information area of a memory 10 which are different area of the same memory and exist at the time the reading of management information is completed (page 27, lines 2 - 15 and lines 16 - 22 (Notice that the process performed in lines 2 - 15 results in the structure of the memory 10 in line 16 - 20.)).

Regarding **claim 20**, AAPA discloses everything claimed as applied above (see claim 10), however, AAPA fails to disclose "wherein the specifying information includes a length and a start address of each the pieces of read management information". AAPA does teach the storing of information regarding the start and end addresses of audio data in a file information area 922 that is part of a file management information area 920 (see claim 10). Notice that the teaching of the starting and ending address of the audio data in the prior art allows one of ordinary skill to recognize/determine the length of the information between the starting and ending addresses.

Therefore, it would have been obvious to one having ordinary skill in the art to modify AAPA by specifically using the teachings of AAPA to include "specifying information [including] a length and a start address of each the pieces of read management information" because one would recognize from the further teachings of AAPA that it would have been obvious to include specifying information including a length and start address (like the indication of the location of audio data with start and end addresses in the prior art) in order to re-locate management information on a recording medium that is unreadable from a previous stored condition in a memory.

**Claims 12 and 13** are rejected under 35 U.S.C. 103(a) as being unpatentable AAPA, in view of Tanji (United States Patent Application Publication US 2001/0013269), hereinafter referenced as Tanji.

Regarding **claim 12**, AAPA and Tanji, the combination of hereinafter referenced as AT, disclose everything claimed as applied (see claim 10), specifically, Tanji discloses a format for storing audio data and management data of a conventionally known digital audio recorder (paragraph [0016], lines 1 - 4, and figure 2) in which management data is recorded from a starting address and audio data is recorded from an address directly after the ending address of management data.

Therefore, it would have been obvious to modify the method of AAPA by specifically using the teachings in Tanji to store read management information and audio data in the claimed order because one having ordinary skill in the art would want to ensure that file management information has priority over audio data (i.e. a non-mobile device).

Regarding **claim 13**, AT disclose everything claimed as applied (see claim 10), specifically, Tanji discloses a format for storing audio data and management data in which audio data is given address priority over management data (paragraph [0015], lines 1 - 4, and figure 1) which resembles the memory structure of figure 11 of AAPA in which file management information is recorded starting from an immediate end address of the audio data area reserved.

Therefore, it would have been obvious to modify the method of AAPA by specifically using the teachings in Tanji to store read management information and audio data in the claimed order because one having ordinary skill in the art would want to ensure that audio data has priority over file information data (i.e. a mobile device).

**Claim 15** is rejected under 35 U.S.C. 103(a) as being unpatentable AAPA, in view of Millikan et al. (United States Patent Application Publication US 2003/0210617 A1), hereinafter referenced as Millikan.

Regarding **claim 15**, AAPA discloses everything claimed as applied above (see claim 10), however, AAPA fails to disclose "wherein the plurality of pieces . . . a predetermined compression format".

In a similar filed of endeavor, Millikan discloses a media player that allows compresses media files from a recording medium to played back while avoiding breaks in audio due to mechanical disturbances (paragraph [0013], lines 1 - 9).

Therefore, it would have been obvious to modify the method of AAPA by specifically using the teachings in Millikan to store/playback audio data of a predetermined compression format because one having ordinary skill in the art would want to be able to have more audio data available than that possible with a standard compact disc having uncompressed data.



**Claim 17** is rejected under 35 U.S.C. 103(a) as being unpatentable AAPA, in view of Fontijn et al. (United States Patent Application Publication US 2006/0013088 A1), hereinafter referenced as Fontijn.

Regarding **claim 17**, AAPA discloses everything claimed as applied above (see claim 10), however, AAPA fails to disclose "in the re-setting step . . . a predetermined capacity".

In a similar filed of endeavor, Fontijn discloses a disc recording device in which a minimum buffer size is maintained to ensure playback (paragraph [0054], lines 1 - 13).

Therefore, it would have been obvious to modify the method of AAPA by specifically using the teachings in Fontijn to ensure that the capacity of the audio data area is reduced no smaller than a certain minimum capacity because one having ordinary skill in the art would want to prevent playback interruption (AAPA, page 29, lines 1 - 3).

**Claim 19** is rejected under 35 U.S.C. 103(a) as being unpatentable AAPA, in view of Fontijn, and further in view of Suzuki (United States Patent Application Publication US 2002/0012297 A1), hereinafter referenced as Suzuki.

Regarding **claim 19**, AAPA and Fontijn disclose everything claimed as applied above (see claim 10 and claim 17 ), specifically, see the argument of claim 17 in regard to maintaining a minimum buffer capacity which further lends itself to "a minimum setting step . . . of the audio data area". However, AAPA and Fontijn fail to disclose "if the capacity . . . from the recording medium".

In a similar filed of endeavor, Suzuki discloses a method of recording information using a buffer and a determination of the amount of data (to be recorded) in the buffer to determine whether recording is appropriate (paragraph [0025], lines 1 - 3, and figure 4). Notice that recording and reproduction are of a dual nature and that the allowance and suspension of recording based upon the amount of data stored to a buffer of a certain size lends itself to the suspension of reading information due to a buffer that is seen as full from the perspective of the file management information area.

Therefore, it would have been obvious to modify the method of AAPA by specifically using the teachings in Suzuki to stop a recording/reproduction operation based on a comparison of the state of a buffer or memory because one having ordinary skill in the art would want to prevent playback interruption (AAPA, page 29, lines 1 - 3). In addition, see the same reason for making the combination of AAPA and Fontijn as described in the argument of claim 17.

**Claims 21, 22, 25, and 27** are rejected under 35 U.S.C. 103(a) as being unpatentable AAPA, in view of Hatanaka et al. (Japanese Patent Application Publication JP 2000-222825 A), hereinafter referenced as Hatanaka.

Regarding **claim 21**, AAPA discloses everything claimed as applied above (see the entire argument of claim 10), however, AAPA fails to disclose "a re-setting step of increasing the capacity of the audio data area by re-defining each part of the management information area storing no management information as an additional part of the audio data area if all pieces of read management information are stored".

In a similar field of endeavor, Hatanaka teaches a ' \*\* -proof ' or vibration proof memory having two different allocated areas for storing 'voice compressed data' or 'music compressed data' and data other than a sound where priority is given to voice compressed data (paragraph [0008] and drawing 3). In drawing 3, the memory area for voice compressed data is increased and the memory area for storing data other than sound is decreased in order to secure shock resistance for the voice compressed data (paragraph [0014]).

Therefore, it would have been obvious to modify AAPA by specifically using the teachings of Hatanaka to include "a re-setting step of increasing the capacity of the audio data area by re-defining each part of the management information area storing no management information as an additional part of the audio data area if all pieces of read management information are stored" because one would want to give memory area priority to audio data to ensure vibration or shock resistance (Hatanaka, paragraph [0014]).

Regarding **claim 22**, AAPA and Hatanaka, the combination hereinafter referenced as AH, disclose everything claimed as applied above (see claims 21 and 20), specifically, see the argument of claim 20 and notice its application to the limitations of claim 22.

Regarding **claim 25**, AH disclose everything claimed as applied above (see claims 21 and 14), specifically, see the argument of claim 14 and notice its application to the limitations of claim 25.

Regarding **claim 27**, AH disclose everything claimed as applied above (see claims 21 and 16), specifically, see the argument of claim 16 and notice its application to the limitations of claim 27.

**Claims 23 and 24** are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA, in view of Hatanaka, and further in view of Tanji.

Regarding **claim 23**, AH and Tanji, the combination of hereinafter referenced as AHT, disclose everything claimed as applied above (see claims 21 and 12), specifically, see the argument of claim 12 and notice its application to the limitations of claim 23 and that the reason for making the combination of AH and Tanji is the same is that given in claim 12.

Regarding **claim 24**, AHT disclose everything claimed as applied above (see claims 21 and 13), specifically, see the argument of claim 13 and notice its application to the limitations of claim 24 and that the reason for making the combination of AH and Tanji is the same is that given in claim 13.

**Claim 26** is rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA, in view of Hatanaka, and further in view of Millikan.

Regarding **claim 26**, AH and Millikan disclose everything claimed as applied above (see claims 21 and 15), specifically, see the argument of claim 15 and notice its application to the limitations of claim 26 and that the reason for making the combination of AH and Millikan is the same is that given in claim 15.

### ***Response to Arguments***

Applicant's arguments with respect to claims 10 – 19 and newly presented claims 20 - 27 have been considered but are moot in view of the new grounds of rejection.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRIAN BUTCHER whose telephone number is (571)270-5575. The examiner can normally be reached on Monday – Friday from 6:30 AM to 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young, can be reached at (571) 272 - 7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/BMB/  
August 27, 2009

/Wayne Young/  
Supervisory Patent Examiner, Art Unit 2627